

Claims:

According to Examiner's requirements based on the final office action mailed on June 11, 2007, in **Allowable Subject Matter**, the final office action stated "*Claims 25 – 28, 46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.*"

Therefore, based on the above Examiner's requirements on the allowable subject matter in the final office action, Applicant has currently cancelled the claims 24, 33-45, and amended the claims 25-32, 46 as follows.

Claim 24 (cancelled)

Claim 25 (currently amended) : The ~~spread spectrum~~
~~based A multichannel modulation Ultra Wideband (UWB)~~
~~communication transceiver of claim 24 wherein said system~~
~~having a multichannel pseudorandom noise (PN) sequence~~
~~mapping, includes further comprising: N-1 delay units~~
~~coupled to N downsampling units followed by N Exclusive OR~~
~~(XOR) units in parallel, and said N XOR units connected to~~
[[the]] a PN sequence look-up table, where N is an integer
and greater than 1.

Claim 26 (currently amended) : The ~~spread spectrum~~
~~based multichannel modulation UWB communication transceiver~~
~~system of claim 25 wherein said N XOR units can be~~
~~controlled to spread [[N]] Q symbols in parallel with L PN~~
~~chips from the PN sequence look-up table, where N, Q and L~~
~~are integers, N and Q is greater than 1, and L is greater~~
and equal to 1.

Claim 27 (currently amended) : The ~~spread spectrum~~
~~based multichannel modulation UWB communication transceiver~~
~~system of claim 25 wherein said multichannel PN sequence~~
~~mapping is used to form N UWB multichannel signals in~~
parallel, where N is an integer and greater than 1.

Claim 28 (currently amended) : The ~~spread spectrum~~
~~based multichannel modulation UWB communication transceiver~~
~~system of claim 27 wherein [[said]] each of the N UWB~~
~~multichannel signals has a chip data rate of 650 Mcps~~
approximately, where N is an integer and greater than 1.

Claim 29 (currently amended) : The ~~spread spectrum~~ based multichannel modulation UWB communication ~~transeeiver~~ system of claim [[24]] 26 wherein said PN sequence look-up table contains ~~M~~ orthogonal spreading sequences that are used to spread the ~~N~~ UWB multichannel signals, where ~~M~~ and ~~N~~ are integers each of the N XOR units can be turned on or off, where N is an integer and greater than 1.

Claim 30 (currently amended) : The ~~spread spectrum~~ based multichannel modulation UWB communication ~~transeeiver~~ system of claim [[29]] 27 wherein each of said ~~N~~ UWB multichannel signals are orthogonal to each other can be turn on or off by controlling each of said N XOR units, where N is an integer and greater than 1.

Claim 31 (currently mended) : The ~~spread spectrum~~ based multichannel modulation UWB communication ~~transeeiver~~ system of claim [[24]] 28 wherein said multichannel PN sequence mapping can produce the same operation results by using an alternative system including:

~~a switch;~~
~~N XOR units;~~
~~said N XOR units connected to the PN sequence look-up table;~~
~~said switch can be controlled to connect with said N XOR in a clockwise direction of rotational uniform speed~~
~~N UWB multichannel signals have a total chip data rate of 650N Mcps approximately, where N is an integer and greater than 1.~~

Claim 32 (currently amended) : The ~~spread spectrum~~ based multichannel modulation UWB communication transceiver system of claim [[31]] 27 wherein said multichannel PN sequence mapping produces a scalability data rate by controlling said switch and/or said PN sequence look-up table in a step of increasing or decreasing 650 Mcps approximately.

Claims 33-45 (cancelled)

Claim 46 (currently amended) : The ~~spread spectrum~~ based A multichannel modulation Ultra Wideband (UWB) communication receiver of claim 40 wherein said having a despreading for pseudorandom noise (PN) sequence and demapping that produces an UWB symbol rate at 446.875 Msps approximately.